

Air and Space this Week

Item of the Week

TWO BAD AIR DAYS: 50 YEARS APART

Originally appeared January 29, 2024

KEY WORDS: Sullenberger Skiles Miracle Hudson Holly Bopper Valens
Jennings Music McLean Flight 320

We are presently in the middle of a two-week period spanning the anniversaries of two bad events for commercial aviation that occurred almost exactly fifty years apart. The “Miracle on the Hudson” happened on January 15, 2009, just over fifteen years ago. The “Day the Music Died” happened on February 3, 1959, sixty-five years ago this week. Another passenger aircraft crashed on that same date, air water landing in New York that didn’t end as well.

THE “MIRACLE ON THE HUDSON”

I am sure that all of you reading this remember the emergency ditching of US Airways Flight 1549 in the Hudson River. Cool thinking and quick action on the part of the flight crew, along with more than a bit of luck, resulted in the loss of the aircraft but only a few minor injuries (plus one) to the 150 crew and passengers aboard. Since the memory of the flight and its outcome is still relatively fresh, I won’t go into the details like I will for the two accidents later in the Item.

Flight 1549 was an Airbus 320 piloted by Chesley Burnett Sullenberger III and Jeffrey Skiles, with three flight attendants and 145 passengers aboard. The flight took off from LaGuardia Airport, bound for Charlotte, North Carolina. Sullenberger was an expert pilot, with almost 20 years of commercial jet experience. He was an outstanding student, both in high school and at the U.S. Air Force Academy, graduating in 1973, finishing #1 in both, which caused the USAF to send him for a MS at Purdue prior to entering pilot training (he had excelled in the Academy’s glider program, too). He earned his wings in 1975, and was assigned to a unit flying the F-4 Phantom II. He moved steadily up the promotion ladder, making Captain and serving in a variety of capacities, including an aircraft accident investigation board. He left the Air Force in 1980, and began flying for Pacific Southwest Airlines, which was acquired by US Airways in 1988. Two years prior to the Miracle, he founded an organization called Safety Reliability Methods, where he served as CEO in addition to his piloting duties. He also worked with both USAF and NTSB accident investigations, and with the Air Line Pilots Association on a variety of safety-related issues. He developed the Crew Resource Management course used for training all pilots at US Airways. He also was the Chair of the ALPA’s Safety Committee and worked with NASA on a study of aircraft accidents.

Just the guy you'd want to be flying when the chips were down!

Jeffrey Skiles, Sully's co-pilot that fateful day, was no slouch on the stick, either. Both his parents were pilots, and he learned to fly by his sixteenth birthday. He flew with Midstate Airlines (1983-1986) flying cargo planes, then moved over to US Airways and had 23 successful years there by the time of the Miracle. He was actually the one flying Flight 1549 when they hit the flock of Canadian geese that destroyed both the aircraft's engines. Sully immediately assumed flight duties, while Skiles attempted to restart the engines, worked the radio with the air traffic controller, Patrick Harten, and handled the necessary checklists, all under extreme stress.

Captain Sully faced a terrible decision, and had but a few seconds to commit himself to one of two courses of action. He and Skiles quickly determined that they were flying a glider with no chance of restoring power, and LaGuardia was too far away for a 180 and landing. Teterboro Airport in New Jersey was closer, and could they could probably glide that far, if everything went right. However, if they didn't make it, all aboard their aircraft, and probably a number of people on the ground, would die a horrible death.

The only alternative was a controlled ditching in the Hudson River. You've seen the video, no doubt. Sully babied that big plane in to a very smooth water landing, and the flight crew (Sheila Dail, Donna Dent, and Doreen Welsh) were able to get everyone out of the plane safely. Local boats made a beeline for the downed aircraft, and the crew and passengers were rescued quickly. One of the flight attendants had an injured leg, more than generally known, but Sully's daring decision and his skill as a glider pilot saved the day.

An investigation by the NTSB quickly cleared the flight crew, and their bravery won them many accolades and rewards, including the 2010 NASM Trophy for Excellence for all five. I had the pleasure of escorting all but Sully around during their time for getting the award. The Education Department had arranged for a live on-line video conference with the crew (a novelty in those days), and I was able to arrange for Patty Harten to call into the show, with the help of a good friend who was a highly-placed air traffic controller. Harten and Skiles had not spoken since the day of the Miracle.

The NTSB conducted a fifteen of simulations to see if Sullenberger could have made it back to LaGuardia or gone to Teterboro. Seven of the 13 simulated attempts to reach LaGuardia succeeded, as did 1 of the 2 simulations for Teterboro. The assumptions upon which the simulations were based were somewhat unrealistic, however (the pilots in the simulation knew ahead of time what had happened to the aircraft). When a small, but reasonable, delay was introduced in the simulation, the airplane crashed. The penalty for failure was enormous, the penalty for a ditching in the Hudson much less so. Therefore, Sully did the Right Thing. Four factors were adjudged to contribute to the successful ditching and rescue: sound decision-making by Sully was most important, followed by the A320 carrying life vests and additional slides/rafts, the performance of the flight crew in evacuating the aircraft, and the proximity of numerous boats capable of rescuing people from the river.

Both Sully and Skiles are no longer flying commercially, but both are big hits on the lecture circuit!

THE “DAY THE MUSIC DIED”

Earning a living making music was difficult in the 1950's. The record industry was just taking off, and to be successful with records, one had to be successful in live performances. That meant touring, often in small venues, even for those who had a few made a few popular recordings.

Buddy Holly had a number of hit records with his band, the Crickets. But in November, 1958, they parted company, possibly because the manager of the Crickets had taken off with some of the money. In any case, Holly needed money because he had just gotten married and there was a child on the way. He signed with General Artists Corporation, anticipating a possible tour overseas in the coming months. But first, he had to tour domestically. He put together a band comprising Tommy Alsup on guitar, Waylon Jennings on bass, Carl Bunch on drums, and vocals by Frankie Sardo. GAC put together a tour schedule, and added additional talent, including Dion and the Belmonts (who would release “Teenager in Love” a month later), Ritchie Valens (“La Bamba,” released in November, 1958, with “Donna” on the A-side), and J.D. “The Big Bopper” Richardson (“Chantilly Lace,” released in June, 1958). It was a pretty impressive line-up!

GAC did a terrible job planning the tour. They had booked a number of venues throughout the upper Midwest, but the locations were all over the place; there was little attempt to make a route among the venues that made any sense at all. The tour was very tightly scheduled, too, with almost no time off between gigs, and large distances of driving in between, often passing by venue sites repeatedly. One bus was available, usually a cast-off school bus in dire need of repair, and there were no roadies at all; the musician had to load and set up their gear. They went through five buses in the first 11 days of the tour, and suffered greatly from cold weather and hard work, to the point where some of the guys were getting sick.

The gang had played a gig in Green Bay on February 1, and they were looking forward to a day off while they drove to Morehead, MN, just across the Red River from Fargo. But an opportunity arose for a gig on February 2 in the Surf Ballroom in Clear Lake, Iowa, and GAC took it. It was a 350-mile drive (no Interstates in those days, either). The bus got there in the late afternoon. Richardson was sick with the flu, and Bunch's feet were frostbitten. Exasperated, Buddy Holly chartered a flight with the assistance of the Surf Ballroom's manager to take him to Fargo after the performance, rather than endure another 350-mile bus ride overnight, a drive that would take them directly past two venues they had already visited earlier in the tour.

There is some dispute as to what happened next.

The chartered aircraft was a Beechcraft Bonanza, capable of carrying only three passengers in addition to the pilot. The prevailing view was that Holly was going to take Jennings and Allsup with him on the flight. Richardson asked Jennings to switch with him because he was so sick,

and Waylon agreed. Valens, who normally didn't like to fly, wanted to fly this time, and Allsup agreed to flip a coin for the seat; Valens "won."

Roger Peterson, the pilot of the Bonanza, was a recently-married 21-year-old who had a grand total of 711 flying hours, with 128 in the Bonanza. He did have 52 hours of instrument training, but had not yet been certified for instrument-only flight; he had failed an instrument check flight nine months earlier. Both he and the flight service he flew for were Visual Flight Rules only. And the Bonanza he would fly that night had an older-style gyrocompass than the one with which he was familiar. The orientation of its artificial horizon display was exactly the opposite of the one he was used to!

It was a dark and stormy night (sorry). Peterson did receive a weather briefing prior to take-off, but it was almost comically inadequate and did not include warnings of the known bad weather on the planned route. What could go wrong?

The Bonanza took off at 12:55 AM local on February 3. The owner of the flight service was watching from the tower as the aircraft executed a 180° turn towards Fargo as it climbed to ~800 feet. The plane's taillight became difficult to see, but it appeared to be descending.

The Bonanza flew about six miles from the airport before it impacted the ground at high speed. It was in a 90° bank to the right when it hit, the right wing gouging a furrow before it was torn off. The fuselage bounced and rolled sideways due to the lift of the remaining wing, hitting nose-first and flipping over, crumpling into a ball. The three musicians suffered extreme trauma injuries as they were ejected from the plane (their seat belts were ripped from the aircraft frame); Peterson died in his seat.

When the air service owner found out the next morning that the plane had missed a scheduled radio communications check, and had not shown up in Fargo, he hopped into another plane to fly Peterson's planned route. He found the wreckage very quickly.

The news of the crash and the death of the musicians made the radio news, at least for a while (you'll see why later in the Item). Holly's wife found out about his death on the radio, and went hysterical. It would be the last time a loved one would find out about a death that way; a policy of "the names of the victims will not be disclosed pending notification of next-of-kin" was instituted soon thereafter.

Dion had a somewhat different version to tell. He recollected that Holly had approached him, Valens, and Richardson, and said that he had chartered a plane, and since they were the only ones with hit records, which drove gig attendance, they should fly to Fargo. He also said that it was Valens that was sick, not Richardson. In his version, the fatal coin flip was between Valens and Dion; there was no mention of Richardson or Allsup. The fare was \$36 each, big bucks in those days, so Dion demurred, and gave Valens his seat, anyway. In any case, Buddy, the Big Bopper, and Richie were gone. But...

The Show Must Go On!

The tour continued, with Bobby Vee taking Buddy Holley's place; he was only 15 at the time. Jennings and Allsup continued on to Moorhead and beyond.

There was no National Transportation Safety Board in those days. Crash investigation was the purview of the Civil Aeronautics Board. They quickly found that neither the air service nor the pilot should have been anywhere near an airplane that night, and also noted the poor weather information that was made available as a contributing cause.

Fans of Buddy Holly still make a pilgrimage to the still-extant Surf Ballroom in Clear Lake for a concert; the line-up for the 50th anniversary of the crash included Los Lobos, Bobby Vee, Graham Nash, Peter and Gordon, and Tommy Allsop and the son of the Big Bopper, too.

This segment's title, the "Day the Music Died," recognizes the reference in Don McLean's famous song, "American Pie," released in 1971.

ANOTHER LANDS IN THE RIVER

Buddy Holly's death received considerable media coverage in the upper Midwest especially, but the news nationwide was soon crowded off the headlines (but not before Holly's wife found out) by another airplane crash, one in which 65 people died.

American Airlines Flight 320 was scheduled to fly from Chicago-Midway to NYC's LaGuardia on February 3, 1959. It was a Lockheed L-188 Electra aircraft, with 73 souls on board. The Electra was a four-engine piston-driven aircraft new to AA's fleet, it had only been in service for two weeks. But the flight crew was quite experienced.

The weather was bad across the upper Midwest, and Chicago was no exception. Snow delayed take-off for almost an hour. Take-off was at 9:54 PM local, and would take less than two hours, flying on autopilot most of the way, at 21,000'. The weather worsened as they approached LaGuardia, the air traffic controller there giving the flight crew info that the ceiling was down to 400' and visibility was just over a mile. The pilots acknowledge the landing clearance to approach from the north, over the East River, and use runway 22. They were three miles out.

Flight 320 plowed into the East River at 160 MPH, just under a mile short of the runway. A number of witnesses reported that the plane was unusually low. A tug boat on the scene cut its tow and managed to rescue eight survivors, including one that had "gone down for the third time." The police and the Coast Guard arrived very soon thereafter, but there was nobody left that they could save, in spite of hearing calls for help. Darkness, dense fog, cold water, and river currents were too much.

The co-pilot, flight engineer, one of the flight attendants, and five passengers survived. Records are a bit confused, apparently there was another person rescued who died of injuries the next day. One of the victims was Beulah Zachary, the executive producer of the recently-cancelled TV show, *Kukla, Fran, and Ollie*. Another was Robert Emerson, an internationally-renowned expert on plant photosynthesis. Both the co-pilot and flight engineer, although badly injured, would recover and return to service with American.

The proximity to the media center of New York, and the larger death toll, blew Buddy Holly's flight off the front pages (although few remember Flight 320 today).

The newly-formed Federal Aviation Administration and the Civil Aeronautics Board were involved in the subsequent investigation. The pilot, Albert DeWitt, was one of the most experienced pilots in the air; he had over 28,000 hours and had flown over seven million miles. The co-pilot had over 10,000 hours. But neither pilot had much experience in the Lockheed L-188. The investigation was hampered by the L-188 not having any sort of flight data recorder.

As was the case with Holly's crash, the investigation soon focused on the flight instruments in the L-188. The altimeter display in the L-188 was very different than the three-hand clock style used previously, and some pilots thought that the new altimeters lagged behind (read too high) at low altitudes on landing approach. Pilot DeWitt, in spite of his hours, had what would be deemed a bad habit of using the auto-pilot too long during the landing approach, preferring to use it in partial manual-control mode. A DC-3 landed a few minutes before the crash and reported that they had had no problem getting under the ceiling and seeing the runway.

The CAB report blamed the pilot and the altimeters for causing the approach to be too low (there was a berm at the end of the runway that would have prevented the pilots from seeing the landing lights due to their too-low approach). The Air Line Pilots Association (and the surviving co-pilot) vigorously contested the CAB's conclusions, calling the report grossly inadequate and being more interested in blaming a dead pilot than determining the cause of the accident.

On February 6, 1959, a special House of Representatives committee was named to investigate the crash and overall safety issues that the entire aviation industry was starting to experience as they transitioned to jet aircraft. The committee was chaired by a former WWII bomber pilot, but they refused to share their findings with the public, complaining that the FAA was withholding information they sought about the altimeters in use in the Lockheed Electra and the Boeing 707.

The Aviation Subcommittee of the Senate Commerce Committee then got involved, in January, 1960. The CAB safety director testified that "if LaGuardia had been equipped with high-intensity landing lights, AA Flight 320 would not have crashed." He also testified that better pilot training and the installation of a flight recorder system was direly needed. Famed pilot Elwood Quesada, then the administrator of the FAA, testified that the FAA had offered LaGuardia 75% of the cost of high-intensity lighting, but LaGuardia officials declined the system, not wanting to spend the remaining 25%.

CODA

If two aircraft accidents on a single day aren't enough, there was almost a third. Pan Am Flight 115, a Boeing 707-121 with 129 souls aboard, was *en route* from Paris to New York when it suffered an uncommanded rapid descent over Newfoundland. The aircraft dropped 6000' in a steep dive before the pilots could regain control.

The plane's captain engaged the autopilot, then left the co-pilot flying the plane and went into the main cabin. The autopilot disengaged, likely due to an accident by the pilot, and put the

aircraft in a steep descending spiral. The co-pilot at the controls was inattentive until the aircraft had built up considerable speed and he was unable to effect recovery. The pilot quickly returned to the cockpit, and the crew was finally able to stabilize the flight. They made an emergency landing at Gander to check out the airplane thoroughly. Good thing they did; the aircraft's flaps had suffered damage.

REFERENCES

THE "MIRACLE ON THE HUDSON"

NTSB Report: <https://www.nts.gov/investigations/AccidentReports/Reports/AAR1003.pdf>

NTSB Docket: <https://data.nts.gov/Docket?ProjectID=73240>

FAA Recordings: https://www.faa.gov/data_research/accident_incident/2009-01-15

Flight Animation: https://www.youtube.com/watch?v=gjXCulRjPas&ab_channel=exosphere3d

Shiner, Linda, Sully's Tale, *Air & Space* magazine, February 18, 2009, <https://wayback.archive-it.org/all/20140511025253/http://www.airspacemag.com/as-interview/aamps-interview-sullys-tale-53584029>

The ditching of US Airways Flight 1549 was the subject of the "Hudson River Runway" episode of the Smithsonian Channel's *Air Disasters* TV series; Season 18, Episode 5:

<https://www.smithsonianchannel.com/episodes/62sfd6/air-disasters-hudson-river-runway-season-18-ep-5>

THE "DAY THE MUSIC DIED"

The Civil Aeronautics Board report: <https://catalog.archives.gov/id/2635701> and https://s3.amazonaws.com/NARApodstorage/opastorage/live/1/6357/2635701/content/arcmedia/nw/Accident_Report.pdf

FAA Report: https://www.faa.gov/lessons_learned/small_airplane/accidents/N3794N

Fiftiesweb: <https://fiftiesweb.com/music/day-music-died> or ...

The Day the Music Died (including coroner's report):

<https://web.archive.org/web/20050829190841/http://fiftiesweb.com/crash.htm>

Norman, Phillip, 2011, *The Definitive Biography of Buddy Holly*, Pan Macmillan, ISBN 978-1-4472-0340-7

Front page of the Mason City Globe-Gazette for February 3, 1959: [here](#)

Analysis of the Lyrics of Don McLean's *American Pie*: <https://www.musicgrotto.com/american-pie-song-meaning-don-mclean>

Wikipedia: https://en.wikipedia.org/wiki/The_Day_the_Music_Died

ANOTHER LANDS IN THE RIVER

Aviation Safety Network summary of CAB report: <https://aviation-safety.net/database/record.php?id=19590203-1>

CAB Accident Report: https://reports.aviation-safety.net/1959/19590203-1_L188_N6101A.pdf

Joan Zeller was a flight attendant on AA Flight 320. She wrote a book, *Angel on the Wing: Flight 320 ... Come In!* ISBN: 978-1532010729 (softcover), ISBN: 978-1532010736 (ebook). It's available in Google Books, an excerpt is here: https://books.google.com/books?id=U-DGDgAAQBAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false

See also: <https://www.broadwayworld.com/bwwbooks/article/Lone-Female-Survivor-of-1959-Plane-Crash-Shares-Story-from-the-Air-20180108>

Hunt, Morton M., 1960, The Case of Flight 320, *The New Yorker* magazine, April 30 issue, excerpt at: <https://www.newyorker.com/magazine/1960/04/30/the-case-of-flight-320> (*The New Yorker's* archive is behind a paywall.)

Ellwood "Pete" Quesada was part of the crew of the endurance test flight of the *Question Mark*, along with Carl Spaatz and Ira Eaker. For more info on that flight, see [here](#); for his role in the early FAA, see [here](#); and for more information about his career, see [here](#).

Wikipedia: https://en.wikipedia.org/wiki/American_Airlines_Flight_320

CODA

Aviation Safety Network Summary: <https://aviation-safety.net/database/record.php?id=19590203-0>

CAB Accident Report: https://reports.aviation-safety.net/1959/19590203-0_B701_N712PA.pdf

Wikipedia: https://en.wikipedia.org/wiki/Pan_Am_Flight_115

Last Edited on 28 January 2024

Copyright 2024 by Steven H. Williams
Non-commercial educational use allowed